

Vocational education and training and higher education in the transition countries

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SUMMARY

This article considers the contrasting developments in the new Member States, namely the declining student participation in vocational training, and the marked increase in participation in higher education, as demonstrated by the latest Eurostat statistics. The reforms of the educational systems which are under way have led to an increase in the numbers undertaking general and higher education and to improvements in overall performances in secondary education. Nevertheless, the substantive reform of initial vocational training remains problematical, while shortages of skilled workers are being felt. However, the differentials in terms of earnings and job markets are such that they continue to encourage the rejection of vocational training and a flight to higher education. At the same time, developments in higher education primarily relate to courses of long duration and are accompanied by an increase in failure at school and graduate unemployment, while significant changes are taking place at post-secondary level calling for substantial development of short higher education courses.

In this context, the messages of the World Bank proposing that vocational training should be moved to post-secondary level, and of the European Union calling for a relaunch of vocational education primarily through a closer link with higher education seem to be contradictory. Further reflection is called for, with a greater understanding of the diversity of the situations, in the context of implementation of the Copenhagen and Bologna processes.

Keywords

Secondary vocational and technical education, post-secondary education, higher education, new Member States

Introduction

According to the Helsinki Communiqué on Enhanced European Cooperation in Vocational Education and Training (¹), *policies should engage all young people in vocational training and/or higher education, ensuring at the same time that they acquire skills and competences relevant to the labour market and to their future lives... VET systems should, as part of flexible educational pathways, increasingly enable progression to further education and training, especially from VET to higher education.*

For countries such as the former accession candidates in which vocational education and training were in difficulty at the time of accession in 2004 (²), these policy goals constitute a threefold challenge: simultaneously to pursue the implementation of effective vocational training, to promote the development of higher education, and to facilitate the passage from one to the other. In 2004, *the sharp increase in the number of students entering higher education has helped the expansion of employment in services and the rapid increase in direct foreign investment. But education and training systems have largely been reactive, and are still ill-equipped to play an active role in future changes in the economy and employment. In particular vocational education and training have remained the poor relations in the changes that have occurred* (Masson, 2004).

Consequently, it would seem to be appropriate to revisit the situation as regards the education and training systems of the 'new Member States' and in particular the developments in vocational training and higher education, together with the issue of access from the former to the latter, where the analyses undertaken in 2004 showed evidence of strong momentum and of certain negative effects on the former. The aim here is to analyse more closely the difficulties and challenges relating to the three Helsinki objectives identified above, and to seek to discern the factual realities behind the conventional wisdom.

Firstly, the considerable difficulties facing vocational training systems in the new Member States must be highlighted, the first

(¹) Communiqué of the European Ministers of vocational education and training, the European social partners and the European Commission, convened in Helsinki on 5 December 2006 to review the priorities and strategies of the Copenhagen process.

(²) See collectively the articles of issue 33 of the European Journal of Vocational Training. See also issue 41 of the European Journal of Vocational Training which has a number of articles devoted to the accession of Romania and Bulgaria.

indicator of which is a fall in numbers while, in parallel, the take-up of higher education places is increasing rapidly. These trends vary, however, from one country to another and a review will make it possible to categorise the various situations, the main causes of which seem to be differing economic strategies. In these circumstances, the European institutions and the World Bank offer different assessments and we shall seek to demonstrate their relevance both in terms of an understanding of the real problems and of the solutions proposed. Lastly, it will be suggested that significant changes are having an effect on the relationship between vocational training and higher education and that this area merits further attention in the context of the implementation of the Copenhagen and Bologna processes.

As regards vocational training, the analysis mainly focuses on its secondary level, in accordance with traditional views and practices and with the existing data. The validity of these boundaries will however be scrutinised and a broader approach advocated. Conversely, we shall not deal with continuing vocational training, which is based on other principles and would necessitate different research. We include the candidate countries Turkey and Croatia, to the extent that information is available.

Contrasting trends in the numbers of students in vocational secondary education and higher education

This analysis is based on the data produced by the European Commission in 2006, supported by figures from Eurostat. The most recent information dates from 2003, meaning that it relates to periods preceding the accession of the new Member States. It is nevertheless very interesting from the point of view of the dynamics observed.

A look at the variations between 2000 and 2003 demonstrates in many cases an often appreciable decline in participation in initial vocational education in the majority of the new Member States, reaching 34 % in Lithuania, whereas it was stable or even increasing slightly on average in the 25 countries of the Union. Only Romania saw limited growth. It might appear that this decline was sharper where the starting point was higher. This is not the case, however, as the decline was limited in the countries having the greatest contribution to VE: the Czech Republic, Slovakia and Slovenia. Conversely, there was a rapid decline in the countries where its level

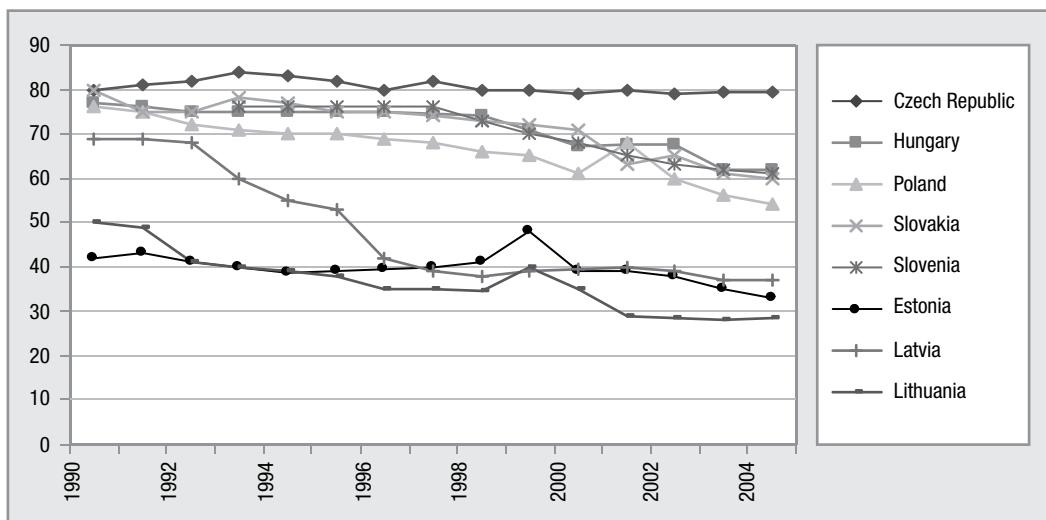
Table 1. Participation in secondary vocational education (VE) and in higher education (HE)

Contribution of vocational education (VE) to higher secondary education (percentage of students in higher secondary education taking vocational courses) in 2000 and 2003 and variation between 2000 and 2003 in percentage terms. Participation of 20-24 year-olds in higher education (HE) as a percentage, in 1998, 2000 and 2003 and variation between 2000 and 2003 in percentage terms.

	EU 25	CZ	EE	CY	LV	LT	HU	MT	PL	SI	SK	BG	RO	TR	HR
VE 2000	55.2	80.2	32.5	14.2	38.6	39.6		24.8	64.3	72.3	78.6	55.7	62.5	49.0	
VE 2003	55.6	79.3	29.3	13.7	37.8	26.1	23.7	24.0	54.3	69.4	75.4	55.0	64.4	38.0	74.2
VE Variation 2003/2000	+0.7	-1.1	-9.8	-3.5	-2.0	-34		-3.2	-16	-4.0	-4.0	-1.3	+1.0	-22	
HE 1998	47.1	23.6	45.5		43.1	39.3	29.9		39.1	45.9	24.2	41.2	18.5		
HE 2000	50.7	28.5	56.7	20.8	56.5	51.5	36.4	21.7	49.9	55.4	28.6	41.6	23.1		
HE 2003	56.4	37.1	64.8	32.9	72.2	69.2	52.2	29.8	62.0	68.0	34.0	41.2	37.3	28.2	39.2
HE Variation 2003/2000	+11	+30	+14	+58	+28	+34	+43	+37	+24	+23	+19	0	+61		

Source: Eurostat, UOE data collection, and OECD for VE 2003 in Hungary.

Figure 1. Contribution of VE to higher secondary education

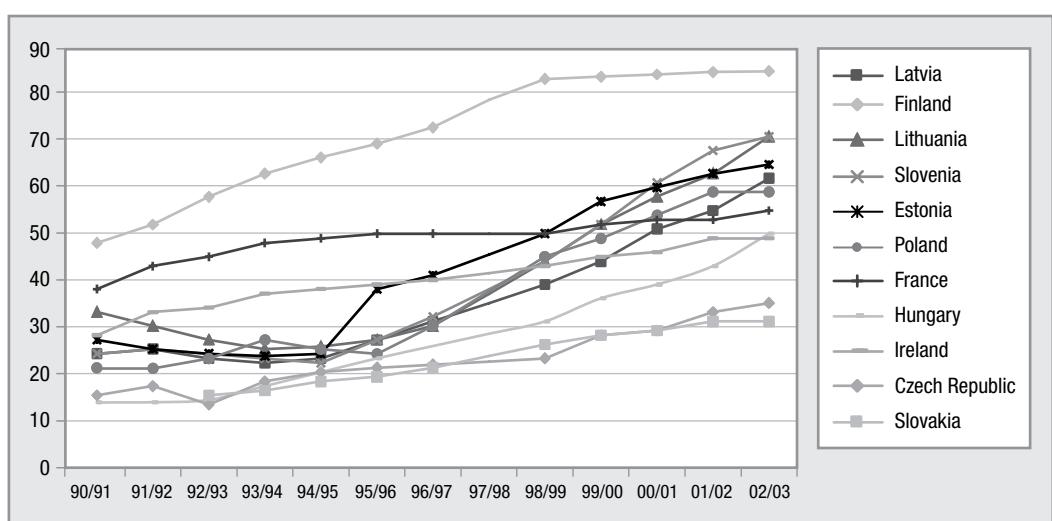


Source: Eurostat

was already far below the European average (Estonia, Lithuania) or where its level was average (Turkey, Poland). These data show a clear polarisation between, on one hand, the Czech Republic, Slovakia and Slovenia in which, along with Austria, the Netherlands, Belgium and Croatia, participation in vocational education exceeded two-thirds of the numbers in higher secondary education and, on the other hand, Estonia, Lithuania, Malta and Cyprus which, with Italy and Portugal, were amongst the countries in which participation in vocational education was below one-third.

Conversely, the increase in participation in higher education was very marked, clearly in excess of that seen on average across the EU, even in countries which had already attained the highest levels. Already significant between 1998 and 2000 and even before that (ETF, 2003) notably in Estonia, Latvia, Lithuania and in Poland, the increase continued and in some cases intensified between 2000 and 2003, reaching 61 % in Romania. Only Bulgaria marked time, principally due to a considerable outflow of students over this period. Nevertheless, the phenomena do not reflect any convergence of the countries' profiles, and participation in higher education continued to increase more quickly than the European average in the countries where it was already strongest.

Figure 2. Growth of the numbers in higher education in the new European States and in some other countries



Source: Eurostat

The diagram below demonstrates how the increase in participation in higher education accelerated in some of the former accession candidates in the mid-1990s to exceed the already notable rate observed at the same time in countries such as France or Ireland.

As can be seen, another polarisation exists between countries with more than two-thirds of young people aged between 20 and 24 in higher education, including Lithuania, Slovenia and Latvia together with Greece, Sweden and Finland, and countries where the figure was less than half, including the Czech Republic, Cyprus, Malta, Slovakia, Bulgaria, Romania, Croatia and Turkey, which share this score with Germany, Austria and Luxembourg.

It is interesting to note that these two polarisations are not exactly symmetrical, since Slovenia has high levels of participation in both VE and higher education, while Malta and Cyprus present the opposing scenario of lower participation in both. Further, it is significant to find eight of the new Member States in the extreme cases shown in the table below, thus showing their considerable differences as compared to the averages observed for the European Union.

Table 2. Participation in VE and HE in 2003

Situation in 2003 (⁹) <i>Old Member State New Member State</i>	Participation in VE exceeding two-thirds of the numbers in higher secondary education	Participation in VE between one-third and two-thirds of the numbers in higher secondary education	Participation in VE below one-third of the numbers in higher secondary education
Participation in HE exceeding two-thirds of 20-24 year-olds	<i>Slovenia</i>	Greece, <i>Latvia</i> , Finland, Sweden	Estonia, <i>Lithuania</i>
Participation in HE between half and two-thirds of 20-24 year-olds	Belgium, the Netherlands	Denmark, France, Poland	Italy, Portugal
Participation in HE below half of 20-24 year-olds	<i>Czech Republic</i> , Slovakia, Croatia, Austria	Germany, Luxembourg, <i>Bulgaria</i> , <i>Romania</i> , <i>Turkey</i>	<i>Malta</i> , Cyprus

(⁹) Countries for which the data for both sectors was not available are not included in this table, namely Ireland, Hungary and the United Kingdom.

Lastly, a third polarisation can be seen amongst the new Member States between on the one hand the Czech Republic, Slovakia and Croatia, which retain very advanced vocational training at secondary level while participation in higher education remains limited, and on the other hand Estonia, Lithuania and Latvia where entry to higher education significantly exceeds the European average and which continue to become closer to the Finnish 'model', but where vocational training is losing an increasing number of students.

A clear contrast is emerging between the Baltic model and the Central European model, a consequence of their respective socio-cultural heritage, but also of differing economic choices. In 2003, Romania and Bulgaria were closer to the Central Europe configuration, although Romania saw very strong growth in higher education. Starting from differing situations, Turkey, Cyprus and Malta showed dynamics which tended to align them rapidly with the Baltic model. Slovenia was in some respects a counter-example, seeing high levels of participation in both vocational training and higher education.

In addition to the highly rapid and unstable nature of the developments under way in the new Member States, and in contrast with the much slower changes in the old ones, there is evidence of difficulty being experienced by the new States in maintaining substantial vocational training at secondary level while expanding higher education. These trends are not new. They are a continuation of changes observed since the beginnings of the 'transition', reflected in a decline in numbers pursuing technical and vocational courses in favour of general courses, and a general increase in education at secondary level and in access to higher education.

The emphasis placed on general training, notably when it is supported by substantial public financing as in the Baltic countries, in Slovenia and Poland, translates into improved performances in international surveys: the PISA surveys (OECD, 2005) show clear progress between 2000 and 2003 in Poland and Latvia, while TIMSS⁽⁴⁾ 2003 (Mullis et al. 2005)

⁽⁴⁾ See Gonzales, Patrick et al., 2005 *'The 2003 Trends in International Mathematics and Science Study (TIMSS) is the third comparison of mathematics and science achievement carried out since 1995 by the International Association for the Evaluation of Educational Achievement (IEA), an international organization of national research institutions and governmental research agencies. TIMSS can be used to track changes in achievement over time. Moreover, TIMSS is closely linked to the curricula of the participating countries, providing an indication of the degree to which students have learned concepts in mathematics and science they have encountered in school. In 2003, some 46 countries participated in TIMSS, at either the fourth- or eighth-grade level, or both.'* Introduction available from Internet: http://nces.ed.gov/programs/quarterly/vol_6/6_4/2_1.asp#2 [cited 12/12/2006].

reveals improvements in performances in mathematics and science in Lithuania and Latvia, at the same time as a decline in Bulgaria and Slovakia. Conversely, progress is limited in higher education in terms of degrees in mathematics, science and technology (MST, European Commission, 2006), in which only Lithuania surpasses the European average. It can be seen therefore that the extraordinary growth in numbers in higher education has as yet only been reflected to a limited extent in the MST courses which the European Union has held to be one of the major priorities of the Lisbon agenda.

The difficulties in vocational and technical secondary education

Firstly, it should be noted that what is referred to here as vocational training covers a wide variety of different courses. It includes both technical training courses with a twofold vocation (the pursuit of higher education studies and access to the job market) and of ‘purely’ vocational courses (in which apprenticeships play a small part) providing access to a qualification and sometimes also to higher education, but in conditions which are clearly more problematical. These courses also have the common feature of being run, in most cases, in educational establishments. A large-scale migration has taken place from the second type towards the first, and even in countries where the combined numbers in both types of courses have changed only slightly, the division of students between the two types has profoundly changed to the extent that ‘vocational’ courses today only represent between 10 % and 40 % of the numbers at secondary level, depending on the country (ETF, 2005). This finding is of fundamental importance in view of the fact that technical courses are by their nature more likely to lead to the pursuit of higher education studies than vocational ones.

At the same time, technical and vocational courses have crossed the borders of secondary education and have begun to have a place in post-secondary education and higher education, in keeping with long-established trends in a number of the ‘old’ European countries. Unfortunately, there is a shortage of data in this area and the analysis undertaken to date concentrates on secondary education.

Therefore, in the context of the educational reforms undertaken in the mid-1990s relating notably to the improvement and extension of basic training, the modernisation of curricula and teacher training,

the changes made to vocational training have not met with the anticipated success (ETF, 2003). There were difficulties with broadly disseminating the results of pilot operations, inadequate finance from both the State and businesses, the absence of political continuity in the conduct of the reforms, and inadequate cooperation between the various stakeholders, and notably between the competent ministries and the social partners. Difficulties occurred, above all, as a result of the complexity of the task of constructing training courses and programmes tailored to the job market in the context of preparation for enlargement, of globalisation and of the economic dilemma as to whether to redevelop industries using low-cost labour, or to promote activities requiring a highly-qualified workforce. Today, the qualifications obtained remain poorly suited to the needs of the job market, the ‘technical’ courses have broadly become de-professionalised and the ‘vocational’ courses are inadequately vocational.

Even in countries in which the reform of vocational education has been undertaken with more continuity and consistency, such as Romania, a recent article refers to complaints from employers that *‘students are not well prepared for the realities of working life and that the standards to which the schools train do not reflect the demands of the workplace’* (West and Ţerban, 2007). The authors are right to point out that dissatisfaction of this sort is shared by numerous countries, but they omit to mention the inadequacy of the budgets allocated to education generally and to vocational training in particular, which have severely affected the quality of the equipment required for practical training in workshops, the updating of infrastructure and teacher training (5).

Certain initiatives, while strongly advocated by the political authorities, have met with mixed success. This is the case with the development of apprenticeships in Slovenia, based on the German model, where the failure – reflected by the fact that only 3 % of secondary pupils were in the ‘dual’ system in 2006 (6) – was due both to the lack of support from companies unwilling to contribute financially to training and to resistance on the part of pupils and families for whom

(5) These shortcomings even led to the much-publicised resignation in 2005 of the Minister for Education on the basis of an inadequate budget.

(6) Slava Pevec, presentation at an ETF conference in December 2006. In addition to considerations on the failure of the introduction of the dual system, the speaker criticised vocational courses for the low number of new standards appropriate to the requirements, the still very traditional approach in terms of curricula, juxtaposing three distinct but poorly coordinated pillars (general, theoretical and practical), the limitations of the social partnership and an over-centralised educational system.

entering apprenticeship meant becoming even further removed from the much-preferred path to higher education (Svetlik, 2004). More generally, considering the problems in developing apprenticeships in the new Member States, Nilsson (2007) emphasises their association with a low rate of academic success and with difficulties in recruiting students, depending on the country. Conversely, the relaunch of apprenticeships in Croatia in 2003 with marked support from the Chamber of Trades seems to have been more successful.

There was limited success also in the case of the ‘profiled secondary schools’ set up in Poland at the start of the current decade based on the Swedish model to encourage improved integration between general education and vocational education through the establishment of a hybrid model, with a strong technology bias but without a precise vocational foundation, swiftly marginalised by students because they were neither sufficiently general to aid access to university, nor sufficiently vocational to constitute preparation for working life (ECOTEC, 2007).

These two examples demonstrate the extent to which the dynamics of the pursuit of university studies have affected and continue to affect the success of the reforms undertaken in vocational training, and notably have deterred students who would previously have embarked on such training. *‘In many countries the advent of a mass university system has put pressure on vocational pathways, which need to deliver access to higher education if they are to compete with general education in the eyes of parents and students’* (West and Ţerban, 2007). Consequently, most of these countries are now faced with increasing shortages of qualified workers, aggravated by the substantial movement of qualified workers from East to West since the enlargements of 2004 and 2007. It is for this reason that, far from expressing satisfaction with the growth in higher education, many leaders are deplored and seeking to curb the decline in numbers undertaking vocational training.

This realisation was particularly noticeable in the early 2000s in Estonia and Latvia, but also in Cyprus which set the objective of raising the rate of participation in vocational training from 12 to 20 % of the numbers in higher secondary education, and in Turkey which aimed for an increase from 35 to 65 %. Nevertheless, the 2003 figures did not indicate a reversal of the trend at that stage. In Romania, which was more determined and organised, it was estimated (West and Ţerban, 2007) that the education system was still producing young people who were overqualified for the jobs currently available, although this could change if the demand for highly qualified workers were

to increase. Thus, Romania saw an increase compared to 2000, as a result of the administrative decision, taken in 1999-2000, to control student intake by limiting access to high schools according to pupils' performance in national tests (Birzea et al., 2000, cited by West and Ţerban, 2007). The Czech Republic adopted a similar approach, maintaining very high numbers in vocational courses, but spending substantial public resources on this, to the detriment of the development of higher education.

More generally, these attitudes are justified by the fact that the influence of traditional industry in the job market is still very strong, much more so than in the rest of Europe. In Slovakia, where automobile construction has seen huge foreign investment in recent years, the demand for qualified workers is very high and justifies training initiatives, which the State is struggling to provide. Slovenia has the problem that pupils are turning away from vocational training while industry still constitutes 80 % of exports.

This realisation has also translated into the accepted need to reform and improve the advice, information and careers guidance systems, or to increase public funding for vocational training (ETF, 2005), and lastly to make a genuine effort to implement the policies and tools advocated in the context of the Copenhagen process launched in 2002 (Masson, 2007).

Developments in post-secondary and higher education

Nevertheless, people are entering the job market later and later, and at the same time the levels of qualification required in certain industries and services are becoming higher. In these fields, the trend is to delay initial vocational training until after secondary education, either to reinforce the skills acquired, or to base the acquisition of qualifications on a more solid foundation of general education, corresponding to the end of secondary studies. Consequently OECD statistics (2006) show considerable developments in 'post-secondary' courses (ISCED level 4⁽⁷⁾) most often at vocational high schools

(7) ISCED: International Standard Classification of Education drawn up in 1997; while ISCED 3 corresponds to upper secondary education, ISCED 4 corresponds to post-secondary non-tertiary education, ISCED 5 is the first stage of tertiary education with the distinction between ISCED 5 A which corresponds to the first stage of long-duration tertiary education, while ISCED 5 B corresponds to short-duration tertiary education (in France, BTS and DUT are classed as ISCED 5 B).

in Poland, Hungary and in the Czech Republic, far exceeding the OECD average of 8 % in 2004, while other observations (⁸) confirm this trend in the Baltic countries, Slovenia and Poland, as well as in Bulgaria, Romania and Turkey.

On the other hand, the developments in higher education relate primarily to long courses (ISCED 5A) to the detriment of short ones (ISCED 5B). Thus, during 2000 the OECD observed limited access to the latter, clearly below the average of the 19 European OECD countries, in the Czech Republic, Hungary, Poland, Slovakia and Turkey. It was however expanding in Hungary and Turkey where it has since exceeded the OECD average in 2004. On the contrary, access to long courses had already overtaken the OECD average in 2000 in Poland where it continued to develop in 2004, and in Hungary where the growth was primarily due to short higher education courses, while progress clearly above average in the Czech Republic, Slovakia and Turkey.

Table 3. Students' access to post-secondary, short higher- and long higher-education courses in 2000 and 2004 (⁹)

%	OECD /EU19 average	Czech Republic	Hungary	Poland	Slovakia	Turkey
Post-secondary entry	9.0	30.4	20.0	13.1	2.8	
Entry to short courses 2000	12.0	9.0	2.0	1.0	3.0	9.0
Entry to short courses 2004	13.0	10.0	9.0	1.0	2.0	16.0
Entry to long courses 2000	45.0	25.0	65.0	62.0	37.0	21.0
Entry to long courses 2004	52.0	38.0	68.0	71.0	47.0	26.0

Source: OECD.

(⁸) ETF, Conference on post-secondary education arranged in Skopje in December 2005.

(⁹) Note that the data below differ slightly from those of Eurostat presented and analysed at the start of the article. However, they cover a longer period, from 2000 to 2004 for the OECD as opposed to 2000 to 2003 for Eurostat. Both, however, reflect the same trends, except perhaps as regards Hungary, for which the OECD data show strong growth but at a lower level than that indicated by Eurostat, at the same time as a broadly higher level being achieved.

This paradoxical situation in which considerable progress is seen in post-secondary education in the Czech Republic, Hungary and Poland, while higher education of short duration remains limited may be explained by the legacy of elitist notions prevailing in the former socialist countries and the reluctance of their universities to deal seriously with vocational education (ETF, 2003; and Cedefop Info, 2007 on the Czech Republic). Nevertheless, this dichotomy is likely to be challenged by the implementation of the Bologna process and the introduction of a ‘vocational Bachelors’ programme as certain countries have started to offer within the European Union. Already, Latvia has demonstrated the transformation of post-secondary education into higher vocational education of short duration.

Further, in spite of significant developments in Estonia, Poland, Slovakia and Romania, the proportion of graduates taking courses in mathematics, science and technology in 2005 remained well below the European average, except in Lithuania, linked to low levels of public spending on scientific research, with the exception of the Czech Republic and Slovenia (Masson, 2004). Despite the priority given to higher education, public funding remains inadequate and the introduction of tuition fees (sometimes high) is becoming increasingly common (Vogel and Ulmanu, 2006).

Students are therefore predominantly taking long university courses and only a limited number are studying mathematics, science and technology, although 2003 data indicate positive trends in a number of countries. Turkey and Lithuania are exceptions, the first due to sustained growth in short courses and the latter because access to mathematics, science and technology courses is above the European average. Overall, the limited progress of short courses and the continuing predominant orientation towards long academic courses do not as yet constitute a favourable backdrop for a large-scale demand for, and success of, secondary VET graduates.

The causes of the instability

It is important to analyse the reasons for these underlying movements specific to the new Member States which are proving detrimental to vocational education and are contributing to the rapid and often uncontrolled expansion of higher education. These turbulent movements result from a substantial differential – far greater than that in the ‘old’ Member States – between the unemployment prospects

of trainees leaving courses depending on their level of qualification, in favour of higher education.

As shown by the table below, the higher/secondary differential actually widened in the Czech Republic between 2000 and 2004 while it decreased in Hungary and in Poland. This phenomenon is interesting as it shows a rapid increase in unemployment among the most highly qualified people since 2000 in Hungary and in Poland, clearly exceeding that observed in the OECD countries of the European Union, and it must be viewed in relation to the rapid progress in the uptake of higher education in those countries, contrary to the more cautious (or less ambitious) approach in the Czech Republic.

Table 4. Unemployment rates by level of study

(prior to the end of secondary education/end of secondary education/higher education) and differential between unemployment rates for secondary education/higher education, in 2000 and in 2004

Unemployment rate	Lower secondary ISCED1/2 2000	Lower secondary ISCED1/2 2004	Secondary studies ISCED3/4 2000	Secondary studies ISCED3/4 2004	Higher education ISCED5/6 2000	Higher education ISCED5/6 2004	Differential secondary/ higher 2000	Differential secondary/ higher 2004
OECD/EU-19	11.3	12.9	6.9	7.2	3.8	4.2	1.8	1.7
Czech Republic	19.3	23.0	6.7	6.4	2.5	2.0	2.7	3.2
Hungary	9.9	10.8	5.3	5.0	1.3	1.9	4.1	2.6
Poland	20.6	27.8	13.9	17.4	4.3	6.2	3.2	2.8
Slovakia	36.3	47.7	14.3	14.6	4.6	4.8	3.1	3.0
Turkey	4.6	8.1	5.5	10.1	3.9	8.2	1.4	1.2

Source: OECD.

The differential is also very high in terms of salary, regardless of the duration of studies. Amongst all of the 22 countries involved in the analysis, including 15 European Union countries (OECD, 2006), Hungary ranked in first place for men holding qualifications resulting from long training courses at higher-education level, ahead of the Czech Republic, Poland being in fourth position. The situation was slightly less favourable for women (Hungary in third place, Czech Republic in ninth place and Poland fourteenth). The differential was also very marked amongst those holding short higher education qualifications, Poland being in first place, the Czech Republic second and Hungary in third place for men.

Table 5. Wage earnings of the population aged 30-44 years by level of education,

as a percentage of the level obtained, with education to the end of secondary studies being used as a benchmark

Relative salaries in 2004	Lower secondary ISCED1/2	Secondary studies ISCED3/4	Post-secondary studies	Short higher education courses	Long higher education courses
Czech Republic / M	81	100		167	203
Czech Republic / F	73	100		131	168
Czech Republic / M+F	75	100		145	193
Hungary / M	77	100	128	154	263
Hungary / F	74	100	114	144	195
Hungary / M+F	75	100	119	144	222
Poland / M	76	100	110	175	186
Poland / F	71	100	103	150	164
Poland / M+F	80	100	100	166	170

Source: OECD.

On the basis of other sources, as regards the higher-education level in general as compared to the end of secondary education, the World Bank (2006) placed Hungary in first place followed by the Czech Republic, Slovenia, Poland and Lithuania. Therefore, in the transition economies of the new Member States, although the risks of unemployment are increasing, the very positive differential in terms of access to employment and the expectations of higher earnings are such as to clearly explain the popularity of higher education and the lack of interest in vocational training.

Further, as indicated by the studies and by evidence collected at numerous conferences, employers repeatedly express the need for employees with key skills that are more easily acquired through higher education, and show little interest in supporting secondary vocational education. If we also consider governmental priorities and the phenomena of emigration of qualified workers, which restrain government willingness to invest in vocational training, it is clear why the Eurobarometer (Cedefop, 2007) recorded a significant lack of interest on the part of individuals and families in vocational training in 2004 in all the new Member States with the exception of Hungary and Estonia, in stark contrast to the old ones. It can be seen therefore that unlike the citizens in the EU-15, the citizens of the new Member States

advocate general studies rather than VET, particularly in Slovenia (53 %/11 %), Slovakia (60 %/13 %), Latvia (56 %/15 %), Czech Republic (42 %/16 %), Lithuania (73 %/18 %), Cyprus (53 %/20 %), and Poland (62 %/27 %), the exceptions being Hungary (21 %/37 %) and Estonia (34 %/38 %) as against 32 %/39 % in the EU-25.

The vicious circle of secondary vocational education and the messages of the World Bank

Consequently, secondary vocational education is faced with a vicious circle. In view of the continuing difficulties it is encountering, there must be huge investment to update it, not only in terms of improving the quality of structure, content and methods, but also in terms of seeking improved efficiency and new resources, whether from the State or from private funds. Further, the costs of courses in this field are higher than those of general courses. The OECD points out that the additional expenditure per student on vocational courses compared to general courses is 15 % in the Czech Republic, 53 % in Hungary, 62 % in Slovakia, and 55 % in Turkey, in the last three cases far exceeding the OECD average of 17 %. But if student uptake is poor, investors have no incentive to invest (¹⁰) and vocational courses become less attractive, which again discourages young people and families from taking them. In this situation, two attitudes can be identified.

Given these circumstances, the World Bank (2006) is inclined to accelerate the trend. On the basis of an analysis of the situation in eight of the new Member States (Czech Republic, Slovakia, Slovenia, Hungary, Poland and the three Baltic countries), the World Bank experts are of the view that *(i) it would not be possible or advisable to fund adequately a traditional VE system which would provide ready-to-work recruits with narrowly specialized skills, (ii) one way to reduce costs would be to locate practical training entirely in-plant but this is increasingly difficult, (iii) EU8 employers' traditional expectations of VE are unreasonable, (iv) traditional VE was the traditional answer to the question, 'What to do with those who have performed less well in basic education', but this answer no longer*

⁽¹⁰⁾ Particularly since the cost in terms of public spending per student is markedly higher in VE as compared to general education, but markedly lower than the cost per student in higher education (OECD, 2006).

convinces, (v) parents and students are showing an increasing preference for general education over VE.

In these circumstances, their recommendations are *(i) do not try to re-create the old model, (ii) close or merge non-viable schools, (iii) scholarships or stipends should be awarded on the criterion of need rather than the type of school attended, (iv) make all practical training in-plant, (v) explore alternative sources of funding, (vi) encourage the growth of private training institutions, (vii) reform higher education financing by a combination of tuition fees, loans and need-based grants which would reduce both the private rate of return on higher education [as compared with other levels of education] and the attractions of tracks that lead to it, (viii) move increasingly towards post-secondary VET, (ix) deal with those who have performed less well in basic education by using imaginative methods within basic education, rather than consigning them to a separate route, and (x) transfer more of the cost of post-secondary training to beneficiaries.*

The World Bank's starting point is close to that set out earlier in this article. It overlooks, however, the importance of the changes that have already taken place notably in the definition of programmes with the introduction of a skills-based approach or of key skills in curricula. It underestimates the dynamics of student intakes and particularly the fall in numbers in VE, notably in purely vocational courses, as well as the rapid rise in numbers in post-secondary vocational education. It is right to call into question the conduct of employers but fails to mention the frequently unenthusiastic attitude of governments to social partnership and new forms of governance. In fact, the search for solutions requires the implementation of new methods of regulating VE between the State, the regions, businesses and social partners, at national, regional, local and sectoral level. It is regrettable that the World Bank is silent on this subject.

As regards the solutions proposed, it seems reasonable to focus on the mechanisms of financing higher education. The concept of promoting increased equity and efficiency in the development of education systems, notably by encouraging the beneficiaries of higher education to contribute to its financing, is in line with thinking within the European Union (European Commission and Council, 2006) and could reduce the differentials examined above. The concept more generally of reassessing the mechanisms for financing VE in the light of an approach based on needs or even performance

rather than on structures is relevant, but a review of the initiatives already undertaken to this end would have been useful.

On the other hand, the suggestion that in-company practical training should be arranged would seem to be wishful thinking in view of the current state of company schemes and the resources available to them. Furthermore, it is founded on a misapprehension about what forms the basis for quality vocational education. Instead of alternating theory (at school) and practice (in a company), true vocational education is based on three pillars: theoretical teaching which is clearly a matter for schools; technical training, which implies working with appropriate equipment and software, but not in a vocational situation, and which must therefore be provided at school, or in a company if it has suitable training rooms; and lastly vocational training which involves working in conditions which are as close as possible to actual production conditions, namely in the company. To assume that the last two pillars are to be dealt with by companies presupposes that they have made the necessary efforts in terms of finance and organisation, which is certainly not the case at present.

The concept that VE could be dissociated from the role it plays in rehabilitating students with academic difficulties in general education is another ambitious objective fuelling debate in a number of countries across the world. The positive results obtained by Poland in the PISA surveys are starting to be viewed as a positive effect of the one-year postponement of specialisation in VE courses. Other countries might draw inspiration from these results. But to believe that VE could be entirely dissociated from any social mission still seems to be largely utopian. The experience of the VE schools in Russia is worth pondering: after having ‘survived’ for many years without any State funding, and having continued to provide mass education for those students who did not dare to enter general courses or who had been excluded from them, these schools have again found the means to invest and to operate and contribute to local and regional development in close keeping with the needs of companies.

The relationship of VE with the social inclusion objectives remains of crucial importance. The OECD (2007) put this subject on the agenda as one of the priorities set for work on VE commenced in 2007: while respecting the diversity of solutions in place in each country, the OECD emphasises the risk in turning too rapidly towards vocational education but draws attention to the advantage

of these courses in combating social exclusion. In any event, the messages of the OECD and, above all, of the World Bank clearly underline the difficulties that VE is currently facing and the need to find solutions.

The messages of the European Union

The European messages are more complex. They focus on parallelism and the value of vocational training and higher education, and extol the success of vocational training courses in terms of access to employment in many countries. Nevertheless, they ask the courses to go further than this and to provide the option of progressing to more advanced training and education, notably by transferring to higher education. They internalise the difficulties encountered in terms of infrastructure, technical equipment and teacher training, and notably the budgetary difficulties of some countries, and aim to combat the unattractiveness of vocational courses essentially through their opening onto higher education.

In fact, they repeatedly emphasise Europe's deficits in terms of higher education compared with its competitors. Conversely, they do not seem to consider the consequences of the experts' forecasts (Cedefop, 2004) of the level of new jobs by 2010 (almost half at higher level but also almost 40 % at medium levels of qualification), whereas this indication should lead to a consideration of the actual significance of this message, the access courses and means of improving the situation. Similarly they still pay only limited attention to the growing unemployment of higher education graduates and to the resulting wastage.

It is interesting to note that the five benchmarks identified in 2003 for monitoring the progress of education and training systems relate to global performances which are intrinsic to the system. None of them really concern vocational education and therefore do not reflect the changes or indeed the crises which it is undergoing, or the fact that no account is being taken of the suitability of the training for the needs of the labour market.

Further, the European messages are global. They persist in considering VE globally, failing to distinguish technical courses from vocational courses, the aims and nature of which are fundamentally different, the former often having profiles which are closer to general courses than vocational ones. They do not question the validity of

the ‘dual mission’ which its limitations. They do not include VE at post-secondary or short higher-education level in their analyses, without seeing the strong links created on both sides from the end of secondary education.

Lastly, they fail to note the difference between business sectors, whereas the industry and service professions show considerable real differences in terms of levels and types of training/qualification. Furthermore, they clearly fail to emphasise the differences between countries according to the level of economic development and their performances in relation to the European benchmarks. The diversity of the Member States following the last two enlargements in 2004 and 2007 is effectively much greater than previously. It may justify more nuanced messages. More generally, they tend to give the impression that all the priorities can be maintained at once in a harmonious model, and never suggest that contradictions may arise between those priorities.

On the other hand, the implementation of the principles, references and tools developed in the context of the Copenhagen process is worthwhile. The setting-up of national certification frameworks based on qualifications constructed on the basis of experience from apprenticeships and with reference to the European certification framework will enable vocational education to be redefined in accordance with job market forecasts and requirements, to shift from a rationale of supply to one of demand in redefining its points of reference and to establish a bridge with continuing vocational training.

The establishment of an active quality assurance policy based on the common European framework and on a series of relevant indicators demonstrating in particular the performance of VET in the jobs market and on self-assessment tools should also facilitate analysis of the performances of the different structures and promote both efficiency and fairness. The implementation of frameworks and procedures suited to the recognition and validation of skills and the reform of information and careers guidance systems will also facilitate the integration of VET into national education and lifelong learning strategies in which it will become possible to identify the priorities and actions to be undertaken. Nevertheless, this application of the Copenhagen *acquis* must avoid the pitfalls of rhetoric into which it has often fallen in the past (Masson, 2007) and be based as far as possible on partnership between all the stakeholders concerned and on a policy based on evidence founded on the production, dissemination and application of evidence.

Conclusion

Returning to the threefold challenge faced by the vocational education and training systems of the new Member States, the following points may be made:

- The reforms of vocational training undertaken towards the end of the 1990s as part of a more general reform of education systems have not met with the expected success with regard to vocational training, but all countries are now involved in the re-examination and relaunch of the reforms in light of the developments of the Copenhagen process. In this context, the contribution of secondary vocational education has sometimes declined dramatically giving rise to significant shortages of medium-level qualifications. At the same time (on the other hand?) performances in general education have improved.
- As a result of the reforms, but above all of a social dynamic fuelled by very significant differentials in terms of the earnings and job prospects, the growth of higher education has been and continues to be impressive. Nevertheless this primarily concerns long courses, and the creation of short vocational courses in higher education continues to be neglected. Furthermore, this growth has so far failed to materialise in scientific and technical courses. It has also revealed significant graduate unemployment in the countries where it was strongest.
- In other words, the shift from vocational education to higher education has seen huge progress, above all due to technical courses which have assumed growing importance alongside purely vocational courses in secondary education. However, this shift has not developed in a controlled fashion. The increase in graduate unemployment and in students leaving school with a qualification suggests that the content of technical courses remains poorly suited to the requirements of higher education, and that the universities have not yet understood the importance of taking an interest in these new students and therefore in developing short vocational courses, in close coordination with vocational and technical secondary schools.

It should also be understood that these developments are taking place in very varied national contexts, reflecting specific legacies and differing economic choices. In particular, the new Member States remain very different from the old ones, and the forces driving them, at the interface between vocational and higher education, are much stronger, indeed unstable.

From a methodological viewpoint, the analysis of vocational training should be refined and specific account taken of its two branches, vocational and technical training, which have fundamentally distinct characteristics and contrasting quantitative developments. Additionally, secondary vocational education should no longer be considered without a simultaneous analysis of the post-secondary and higher branches by means of it is further extended. Lastly, the measures applicable to the countries in which vocational education still represents over 70 % of the numbers in secondary education and in which industry remains predominant will not be the same as those which need to be taken in countries where vocational education makes up less than 30 % of secondary education and in which efforts are focused on advanced technology. Consequently, it is difficult to apply the same reasoning and recommendations to all countries.

In view of the dynamics created in the last few years through the open method of coordination in the fields of education and employment, it is perhaps the case that the joint implementation of the processes of Copenhagen and Bologna is creating appropriate conditions for a more structured review and for conducting the necessary reforms in a coordinated and more controlled manner. However, this remains conditional on the pitfalls of rhetoric being avoided and on giving proper thought to the coordination of the two processes.

Bibliography

- Cedefop; Tessaring, Manfred; Wannan Jennifer. *Cedefop synthesis of the Maastricht study. Vocational education and training: key to the future. Lisbon-Copenhagen-Maastricht: mobilising for 2010.* Luxembourg: Publications Office, 2004. Available from Internet: http://www.cedefop.europa.eu/etv/Information_resources/Bookshop/publication_details.asp?pub_id=382 [cited 30.1.2009]
- Cedefop. Vocational training Eurobarometer 2004. In Cedefop, *Zooming in on 2010. Reassessing vocational education and training.* Luxembourg: Publications Office, 2007.
- Cedefop; Lipińska, Patrycja et al. *Zooming in on 2010 Reassessing vocational education and training.* Luxembourg: Publications Office, 2007. Available from Internet: http://www.cedefop.europa.eu/etv/Information_resources/Bookshop/publication_details.asp?pub_id=474 [cited 30.1.2009]
- Cedefop; Pražmová, Markéta. Czech Republic: Accreditation to bolster tertiary professional schools. The role of tertiary professional schools. In *Cedefop Info 2/2007*, page 5. Available from Internet: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/473/C27E1EN.html [cited 30.1.2009]
- European Commission. *Staff working document of the Commission. Progress towards the Lisbon objectives in education and training. Report based on indicators and benchmarks.* May 2006. SEC(2006) 639. Available from Internet: <http://ec.europa.eu/education/policies/2010/doc/progressreport06.pdf>. [cited 11.06.2008]
- European Commission. *Communication from the Commission to the Council and to the European Parliament. Efficiency and equity in European education and training systems.* September 2006. SEC (2006) 1096. Available from Internet: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0481:FIN:FR:PDF> [cited 11.6.2008]
- Czesaná, Věra; Kofroňová, Olga. Attitudes to education and educational pathway preferences in the Czech Republic. *European journal of vocational training*, 2004, No 33. Available from Internet: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/404/33_en_czesana.pdf [cited 30.1.2009]

- Dimitrova, Elka. Challenges and perspectives to the adult vocational training system in Bulgaria. *European journal of vocational training*, 2007, No 41. Available from Internet: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/476/41_en_Dimitrova.pdf [cited 30.1.2009]
- Ecotec. *Main messages from beyond the Maastricht Communiqué. Draft summary of the final report on the 'Helsinki study'*, 2007.
- ETF – European Training Foundation. *Thirteen years of cooperation and reforms in vocational education and training in the acceding and candidate countries*. Turin: ETF, 2003.
- ETF – European Training Foundation. *Financing vocational education and training in the EU new Member States and candidate countries, Recent trends and challenges*. ETF, June 2005.
- European Commission. *Education and Training 2010. Draft cross-country analysis. Statistical annex*. Brussels: DG EAC, 2007 (first draft, 28 August 2007).
- Eurostat. CVTS3 Provisional data, Continuing Vocational Training Survey. October 2007 (unpublished).
- Ganova, Penka. New trends in initial vocational education and training in Bulgaria. *European journal of vocational training*, 2007, No 41. Available from Internet: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/476/41_en_Ganova.pdf [cited 30.1.2009]
- Gonzales, Patrick et al. Highlights from the trends in international mathematics and science study (TIMSS) 2003. *Education Statistics Quarterly*, 2005, Vol. 6, Issue 4. Topic: Featured topic: international assessments. Introduction, summary and references available from Internet: http://nces.ed.gov/programs/quarterly/vol_6/6_4/2_1.asp#2 [cited 11.06.2008]
- Leney, Tom. Achieving the Lisbon goal: the contribution of VET. *Final report to the European Commission*. London, Qualifications and Curriculum Authority, 2004. Available from Internet: http://ec.europa.eu/education/policies/2010/studies/maastricht_en.pdf [cited 11.6.2008]
- Masson, Jean-Raymond. Implementation of the Lisbon objectives by the acceding and candidate countries. *European journal of vocational training*, 2004, No 33. Available from Internet: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/404/33_en_masson.pdf [cited 30.1.2009]

- Masson, Jean Raymond. The contribution of European vocational training policy to reforms in the partner countries of the European Union. *European journal of vocational training*, 2007, No 41. Available from Internet: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/476/41_en_masson.pdf [cited 30.1.2009]
- Mullis, Ina; Martin, Michael; Foy Pierre. *IEA's TIMSS 2003 international report on achievement in the mathematics cognitive domains, findings from a developmental project*. Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College, 2005. Available from Internet: http://isc.bc.edu/PDF/t03_download/t03cdrpt_frontmatter.pdf [cited 12.12.2007]
- Nilsson, Anders. Contemporary national strategies in vocational education and training - convergence or divergence? *European journal of vocational training*, 2007, No 41. Available from Internet: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/476/41_en_Nilsson.pdf [cited 30.1.2009]
- OECD. *Education at a glance*. Paris: OECD, 2006.
- OECD. *PISA, Programme for international student assessment. Learning for tomorrow's world. First results from PISA 2003*. Paris: OECD, 2005.
- OECD. *Innovation systems and policies in VET: Background document*. Paris: OECD, 2007.
- Svetlik, Ivan. Adjusting to the falling interest in VET in Slovenia. *European journal of vocational training*, 2004, No 33. Available from Internet: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/404/33_en_svetlik.pdf [cited 30.1.2009]
- Vogel, T.K.; Ulmanu, Alex. Snapshots of education developments and trends from central Europe to central Asia 2005-2006. In *The Gaming Lawyer – TGL*. December 2006.
- West, John; Ţerban, Madlen. Fit for Purpose? The Romanian system of VET. *European Journal of Vocational Training*, 2007, No 41. http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/476/41_en_west.pdf [cited 30.1.2009]
- Wójcicka, Maria. Reform in Polish vocational education. *European journal of vocational training*, 2004, No 33. Available from Internet: http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/404/33_en_wojcicka.pdf [cited 30.1.2009]
- World Bank. Fiscal efficiency and vocational education in the EU8 countries. Document of the World Bank, September 2006.